COVERAGE: The authors of the articles in this book have attempted to elucidate various aspects of precision casting by several methods, such as casting by the lost-wax process, in gypsum cement molds, in shell molds, and in silicate-bonded molds. The following topics are discussed: mechanical properties of structural and special-purpose steels of various types during the filling of hot molds made by the lost-wax process; investigation and practical application of various materials (low-melting compositions, refractory coatings, binders, different types of gypsum for casting of nonferrous metals); techniques of making intricate shell-mold cores; etc. This collection of articles is based on materials presented at a conference on the exchange of experience in the production of precision casting, held in 1956 at the Moskovskiy dom nauchno-tekhnicheskoy propagandy im. F.E. Dzerzhinskogo (Moscow Office of Scientific and Technical Propaganda im. F.E. Dzerzhinskiy).

Ozerov, V.A., Candidate of Technical Sciences. Pattern Compositions

AVAILABLE: Library of Congress

Card 5/5

GO/sfm
1-5-59

AUTHOR: Baradan'yants, V.G., Engineer SOV-128-58-7-4/20

TITLE: Casting Non-Ferrous Metals into Plaster Molds (Lit'ye tsvetnykh metallov v gipsovyye formy.)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 7, pp 9-11 (USSR)

ABSTRACT: General information is presented on existing methods of casting non-ferrous metals into plaster forms, the preparation of plaster and the physical properties of the plaster and asbestos used for it. Recommendations are given for preparation of the plaster mold mixture, the making of molds, processing the molds in autoclave, drying, the runner systems and plaster "put-on" pieces (Fig. p 10) used for thin-walled aluminium and magnesium castings to increase the hydrostatic pressure of metal during the filling of the mold, the composition of mold lining (refractory clay, asbestos and water glass). A high percentage of

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good thin-wall castings, 60-75%, is indicated and compared with very low turnout of 3-20% obtained by casting into earth molds or by mechanical production from blanks. There is 1 diagram.

1. Metals--Casting 2. Molding materials--Physical properties
3. Molds--Production

AUTHOR: Baradan'yants, V.K. SOV-128-58-10-2/19

TITLE: The Accurate Casting of Large-Dimension Steel Parts (Tochnoye lit'ye krupnogabaritnykh stal'nykh detalyey)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 10, pp 4 - 6 (USSR)

ABSTRACT: The author states that present steel brands and casting methods are not fully suitable for an accurate casting of large-dimension steel parts. Difficulties arise with large surfaces of up to 2 mm thickness, numerous openings, thin ribs and edges, etc. The occurrence of micro-cracks limits the range of desired castings. Several examples are given. There are 4 diagrams and 1 photo.

1. Steel--Casting 2. Castings--Fracture

Card 1/1

18(5)
AUTHOR: Baradan'yants, V.K., Engineer

TITLE: Plaster Mould Casting by Lost-Wax Process

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 10, pp 27-29 (USSR)

ABSTRACT: The author states that while using ethyl silicate smear, dry or liquid filler, one of the main shortcomings of the lost-wax process for the casting of components is the long cycle process of precision casting (2-3 days). Precision casting in plaster mould shortens the cycle process and makes it more economical by using cheap materials as sand, plaster, asbestos and others. Plaster mould casting enables development of a new branch of technology precision casting of magnesium alloy components. Ethyl silicate ceramics, especially heated up to 350-400° C, cause combustion even explosion of the magnesium. Plaster-crystobalite mixtures (with high crystobalite contents) do not show any shrinkage du ing cooling, but they show the greatest expansion (1.4%) of a plaster mixtures when they are heated up to only 200-300° C. Plaster-crystobalite mixtures have a lower stability than pla

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...crystalli... can be ...or

Plaster Mould Casting by Lost-Wax Process

-sand-asbestos mixtures. They are more expensive and are not yet produced in industry. Several mixtures were tested by the author. Two of them are recommended in the article: 1) 50% sand K016A; 40% high resistant plaster type 350; 10% antophilite-asbestos of the 7th quality; 2) 70% crystobalite; 30% high resistant plaster type 350. 35 parts of water are needed to 100 parts of dry plaster mixture of consistence 1, and 35-37 parts water to mixture 2. To lower the shrinkage of plaster-sand-asbestos mixtures during cooling, it is recommended, treating it with steam of 1.2-1.3 atü for 6-8 hours. High quality castings, not thinner than 8 mm, can be produced in an autoclave under air pressure. The crystallization takes place in a way which has been elaborated by Academician Bochvar and Professor Spasskiy.

Card 2/2

BARADAN'YANTS, V.K.

Gypsum die molds. Lit.proizv. no.7:1-3 Jl '62. (MIRA 16:2)
(Precision casting) (Molding (Founding))

BARADAN'YANTS, V.K.; KATSMAN, A.B., inzh., retsenzent; MARTENS, S.L., inzh., red.; DEMKINA, N.F., tekhn. red.

[Gypsum equipment for precision casting] Gipsovaia osnastka dlia tochnogo lit'ia. Moskva, Mashgiz, 1963. 93 p. (MIRA 16:4)

(Precision casting--Equipment and supplies)
(Gypsum products)

BARADIAN, L.A.

Late results of surgery for acute appendicitis. Zdrav. Belor. 5 no.10:22-23 O '59. (MIRA 13:2)

1. Iz khirurgicheskogo otdeleniya bol'nitsy Minskogo avtozavoda (zaveduyushchiy otdeleniyem Yu.I. Tayts) i Vidzovskoy raybol'nitsy (glavvrach I.I. Romashko). Zaveduyushchiy khirurgicheskim otdeleniyem Vidzovskoy rayonnoy bol'nitsy Molodechnenskoy oblasti.
(APPENDECTOMY)

BARADNAY, Gyula, dr.; HOFFMANN, Janos, dr.; OKROS, Jozsef, dr.

Dyschondroplasia and hemangiomatosis (Maffuci's syndrome). Orv. hetil. 101 no.49:1753-1755 4 D'60.

1. Szegedi Orvostudomanyi Egyetem Korbonctani es Korszovettani Intezet, II. sz. Sebeszeti Klinika es Rontgenklinika.
(DYSCHONDROPLASIA)
(ANGIOMATOSIS)

CSAPO, Gabor, dr.; BARADNAY, Gyula, dr.; RAK, Kalman, dr.

Fatal panhemolophthisis during thiomicid therapy. Orv. hetil. 102 no.14:648-650 2 Ap '61.

1. Szegedi Orvostudomanyi Egyetem, I sz. Belgyogyaszati Klinika es Korbonctani Intezet.

(BONE MARROW dis)
(THIOSEMICARBAZONES toxicol)

BACHRACH, Denes; B. SZABO, Eva; BARADNAY, Gyula; KORPASSY, Bela

Histological changes of the adrenal cortex in dehydration and rehydration. Kiserl. orvostud. 14 no.3:273-280 Je '62.

1. Szegedi Orvostudomanyi Egyetem Korbonctani es Korszovetanni Intezete es Borgyogyaszati Klinikaja.
(ADRENAL CORTEX anat & histol) (DEHYDRATION exper)

NEMETH, Andras, dr.; IMRE, Jozsef, dr.; KAPROS, Karoly, dr.;
BARADNAY, Gyula, dr.

Our experience with kidney homotransplantation. Orv. hetil.
104 no.34:1602-1604 25 Ag '63.

1. Szegedi Orvostudomanyi Egyetem, I Sebeszeti Klinika.
(KIDNEY TRANSPLANTATION)
(ANTIGEN-ANTIBODY REACTION)

BARADNAY, Gyula, dr.; GAL, Gyorgy, dr.; NEMETH, Andras, dr.

Bilateral (symmetrical) renal cortical necrosis. Orv. hetil. 105 no.4:1884-1888 4 0'64

1. Szegedi Orvostudomanyi Egyetem, Korbonctani es Korszovettani Intezet es I. Sebeszeti Klinika.

BARADNAY, Gyula, dr.; MONUS, Zoltan, dr.

Sex-chromatin studies in female breast cancer. Orv. hetil. 106 no.32:1499-1501 8 Ag'65.

1. Szegedi Orvostudomanyi Egyetem, I. Sebeszeti Klinika, Korbonctani es Korszovettani Intezet.

HUNGARY

BARADNAY, Gyula, Dr; Medical University of Szeged, I. Surgical Clinic (director: PETRI, Gabor, Dr, prof.) (Szegedi Orvostudomanyi Egyetem, I. Sebeszeti Klinika).

"A New Method for the Treatment of Suture Suppuration and Deep-Seated Fistulas."

Budapest, Magyar Sebeszet, Vol XIX, No 4, Aug 66, pages 251-253.

Abstract: [Author's Hungarian summary] Patients with postoperative suture suppuration, chronic fistulas were treated according to the Rabl method, using tight suction bandages prepared with a mixture of powdered dextrose and 2 per cent Rivanol. On the basis of the favorable results, the method is considered to be valuable and is recommended by the author. 1 Hungarian, 1 Western references.

1/1

KORPASSY, Bela, Dr.; SZONYI, Ferenc, Dr.; BARADNAY, Gyula, Dr.

Experimental studies on causes of the rare occurrence of neoplastic metastases in skeletal muscles. Orv. hetil. 99 no.29:982-985 20 July 58.

1. A Szegedi Orvostudomanyi Egyetem Korbonctani es Korszovettani Intezetenek (igazgato: Korpassy Bela dr. egyet. tanar) kozlemenye.
(MUSCLES, neoplasms
exper. induction of metastatic tumors in skeletal musc. of rabbits (Hun))

L. T. BARADZEY, V. I. RUBTSOV, Yu. A. SMORODIN, M. V. SOLOVYEV

Absorption of High Energy Nucleions in the Atmosphere and Production of Mesons

report submitted for the 8th Intl. Conf. on Cosmic Rays (IUPAP), Jaipur, India, 2-14 Dec 1963

KU[illegible]IN, G.I., inzh.; BARADULIN, V.L., inzh.

Start and frequency characteristics of large turbogenerators.
Elek. sta. 36 no.8:46-51 Ag '65. (MIRA 18:8)

BARADULINA, M. G.

"Peritonsillar Abscesses of Dental Origin." Sub 28 Apr 47, Moscow Stomatological Inst

Dissertations presented for degrees in science and engineering in Moscow in 1947 *

SO: Sum No. 457, 18 Apr. 55

*Cand. Med. Sci.

BARADULINA, M. G.

"Peritonsillar Abscesses Caused by the Teeth," Stomatologiya, No. 2, 1949

Cand. Med. Sci.

BARADULINA, M.G., starshiy nauchnyy sotrudnik

Clinical anatomical studies on lymph vessels and lymph nodes of the larynx in adult man. Vest.oto-rin. 16 no.2:65-68 Mr-Ap '54. (MLRA 7:6)

1. Iz otdeleniya ukha, gorla i nosa (zav. prof. I.Ya.Sendul'skiy) Onkologicheskogo instituta imeni P.A.Gertsena (Moskva)
(LARYNX, anatomy and histology,
*lymphatic system in adults)
(LYMPHATIC VESSELS,
*larynx, in adults)
(LYMPH NODES,
*larynx, in adults)

BARADULINA, M.G., starshiy nauchnyy sotrudnik

Clinical aspects and therapy of lymphatic metastases in laryngeal cancer. Vest.oto-rin. 17 no.2:55-59 Mr-Ap '55. (MLRA 8:7)

1. Iz Nauchno-issledovatel'skogo onkologicheskogo instituta imeni P.A.Gertsena (zav. oto-laringologicheskim otdeleniyem D.I.Zimont), Moskva.

(LARYNX, neoplasms,
metastases, lymphatic)
(LYMPHATIC SYSTEM, neoplasms,
metastases from larynx)

BARADULINA, M.G., starshiy nauchnyy sotrudnik

Chondroma of the larynx. Vest.oto-rin. 18 no.5:132-133 S-O '56.
(MLRA 9:11)

1. Iz oto-laringologicheskogo otdeleniya (zav. - prof. D.I.Zimont) Nauchno-issledovatel'skogo onkologicheskogo instituta imeni P.A. Gertsena, Moskva.

(LARYNX, neoplasms
chondroma)
(CHONDROMA, case reports
larynx)

BARADULINA, M.G., starshiy nauchnyy sotrudnik

Perithelioma of the larynx. Vest.oto-rin. 18 no.5:136-137 S-O '56.
(MLRA 9:11)

1. Iz oto-laringologicheskogo otdeleniya (zav. - prof. D.I.Zimont) Nauchno-issledovatel'skogo onkologicheskogo instituta imeni P.A. Gertsena, Moskva.

(HEMANGIOPERICYTOMA, case reports
larynx)
(LARYNX, neoplasms
hemongiopericytoma)

RARADULINA, M.G., starshiy nauchnyy sotrudnik.

Adenocarcinoma of the trachea. Vest.oto-rin. 18 no.5:140 S-O '56.
(MLRA 9:11)

1. Iz oto-larinologicheskogo otdeleniya (zav. - prof. D.I.Zimont) Nauchno-issledovatel'skogo onkologicheskogo instituta imeni P.A. Gertsena, Moskva.
(TRACHEA--CANCER)

BARADULINA, M. G., Doc Med Sci -- (diss) "Clinical [redacted] and Treatment of Regional Metastases of Cancer of the Larynx." Mos, 1958. 19 pp (Second Mos State Med Inst im N. I. Pirogov), 300 copies (KL 40-58, 114)

B, HNO, Ped m.2, 1.8

VOYACHEK, V.I., prof.; KOLOMIYCHENKO, A.I., prof.; SENDUL'SKIY, I.Ye., prof.; BARADULINA, M.G., starshiy nauchnyy sotrudnik.

All-Czechoslovak Congress of Otorhinolaryngologists. Vest.oto-rin. 20 no.1:120-124 Ja-F '58. (MIRA 11:3)

1. Deystvitel'nyy chlen AMN SSSR (for Voyachek).
(CZECHOSLOVAKIA--RESPIRATORY ORGANS--CANCER)

BARADULINA, M.G.

Complications in the surgical treatment of patinets with regional metastases of cancer of the larynx. Vop.otorin. 21 no.6:78-83 N-D '59. (MIRA 13:4)

1. Iz otdeleniya bolezney ukha, gorla i nosa (zaveduyushchiy - prof. D.I. Zimont) Moskovskogo onkologicheskogo instituta imeni P.A. Gertsena.

(LARYNX, neoplasms)
(NECK, neoplasms)

BARADULINA, M.G., starshiy nauchnyy storudnik

Symptomatology, course, and differential diagnosis of cervical metastases in laryngeal cancer. Zhur. ush., nos. i gorl. bol. 20 no. 3:41-45 My-Je '60. (MIRA 14:4)

1. Iz laringologicheskogo otdeleniya (zav. - prof. D.I. Zimont) Onkologicheskogo instituta imeni P.A. Gertsena.
(LARYNX--CANCER)

BARADULINA, M.G., starshiy nauchnyy sotrudnik

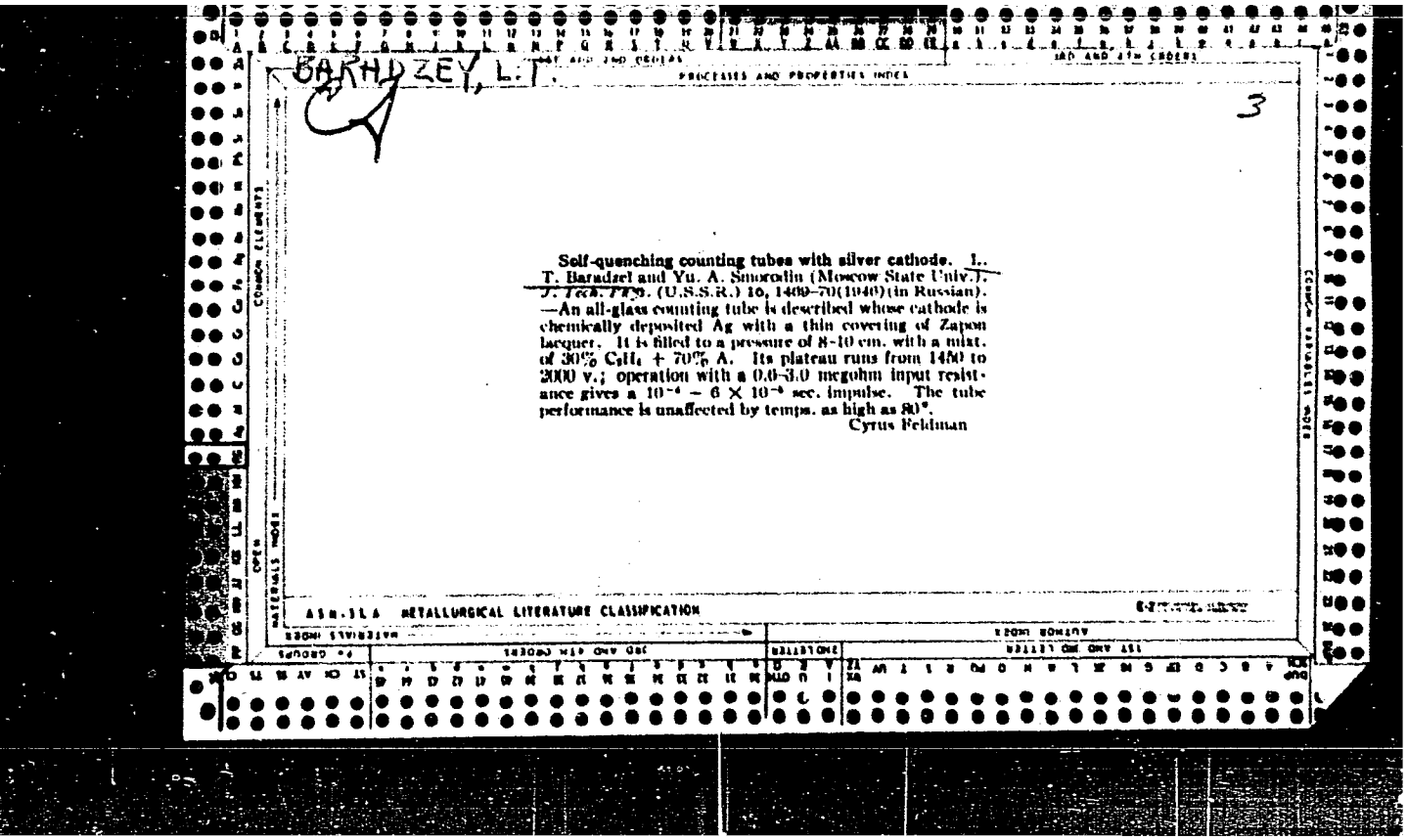
Individual operation in the field of the primary focus and regional metastases in cancer of the larynx. Vest.otorin. no.6:51-55 '61. (MIRA 15:1)

1. Iz otorinolaringologicheskogo otdeleniya (zav. - prof. D.I. Zimont [deceased]) Onkoloticheskogo instituta imeni P.A. Gertsena, Moskva.
(LARYNX--CANCER)

BARADULINA, Mariya Georgiyevna; KHAPERIYA, R.V., red.; PRONINA, N.D., tekhn. red.

[Clinical aspects and treatment of regional metastases in laryngeal cancer] Klinika i lechenie regional'nykh metastazov raka gortani. Moskva, Medgiz, 1963. 166 p.
(MIRA 16:10)

(LARYNX—CANCER) (METASTASIS)



BARHDZEY, L.T.

3

PROCESSES AND PROPERTIES INDEX

Self-quenching counting tubes with silver cathode. L. T. Baradzei and Yu. A. Smorodin (Moscow State Univ.). *Zhur. Tekh. Fiz.* 10, 1469–70(1940)(in Russian). —An all-glass counting tube is described whose cathode is chemically deposited Ag with a thin covering of Zapon lacquer. It is filled to a pressure of 8–10 cm. with a mixt. of 30% C_2H_5OH + 70% A. Its plateau runs from 1450 to 2000 v.; operation with a 0.6–3.0 megohm input resistance gives a 10^{-4} – 6×10^{-5} sec. impulse. The tube performance is unaffected by temps. as high as 80°.
Cyrus Feldman

A.S.M.-I.L.A. METALLURGICAL LITERATURE CLASSIFICATION

PA 33/49T93

USSR/Nuclear Physics - Cosmic Radiation Oct 48
Nuclear Physics - Particles

"Studies of the Soft and Hard Components of Stratospheric Cosmic Showers," L. T. Baradzey, S. N. Vernov, Yu. A. Smorodin, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, Moscow State U imeni M. V. Lomonosov, 3 pp

"Dok Ak Nauk SSSR" Vol LXII, No 4

Gives graphic results of five sounding-balloon flights to determine the number of cosmic particles by a telescope with various filters at heights up to 30 km in summer and fall 1947 over Moscow.

33/49T93

USSR/Nuclear Physics - Cosmic Radiation (Cont'd) Oct 48

Gives the physical arrangement, and describes counters and absorbents. Submitted by Acad S. I. Vavilov, 13 Jul 48.

33/49T93

BARADZEY, L. T.

BARADZEY, L. T.

PA 55/49T73

USSR/Nuclear Physics - Cosmic Rays Nov 48
Nuclear Physics - Particles

"Disintegrating Particles in the Composition of Cosmic Rays in the Stratosphere," L. T. Baradzey, S. N. Vernov, Yu. A. Smorodin, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, Moscow State U imeni M. V. Lomonosov, 2 pp

"Dok Ak Nauk SSSR: Vol LXIII, No 3

Up to 25-km altitude, measured intensity of radiation at a zenith angle of 60° and intensity of vertically-directed radiation in the stratosphere of penetrating 8 cm of lead. Difference in intensity for various zenith angles gave

55/49T73

USSR/Nuclear Physics - Cosmic Rays (cont'd) Nov 48

difference in the number of mesons disintegrating above the observation point. Registry of the number of coincidences in outer counters of the telescope and counters moved beyond its solid angle permitted establishing the number of rays. Submitted by Acad S. I. Vavilov 30 Sep 48.

55/49T73

BARADZEY, L.T.

4223

INTERACTION OF COSMIC RAY PROTONS WITH LIGHT NUCLEI ACCORDING TO MEASUREMENTS TAKEN WITH WILSON CHAMBER AT 9 KM ALTITUDE. L. T. Baradzei, V. I. Rubtsov, Yu. A. Smorodin, M. V. Solov'ev, B. V. Tolkachev, and Z. I. Tulinova. (Lebedev Inst. of Physics). Izvest. Akad. Nauk S.S.S.R. Ser. Fiz. 19, 502-7(1955) Sept.-Oct. (in Russian)

This investigation of cosmic proton interaction with matter at high altitudes was facilitated by the high intensity of protons and negligible content of π mesons in the nuclear active component. The measurements of proton interactions with beryllium nuclei Be^8 were made with a Wilson chamber of Ø 200 mm and illumination depth of 500 mm. The chamber was working in a magnetic field with strength of 9000 Oe. A beryllium plate of 5.3 g/cm^2 was placed in the chamber for measuring the space angles between the shower particles and the primary particle traces over the plate. The measurement error for the space angles was within 1°. The particle angular distribution in the showers and the data on impulses are given. (R.V.J.)

BARADZEY, L. T.

56-7-3/66

AUTHOR BARADZEY, L.T., RUBTSOV, V.I., SMORODIN, Yu.A., SOLOV'YEV, M.V., TOCHKAYEV, B.V., TULINOVA, Z.I.

TITLE On the Formation of the Electron-Photon-Component in the Interaction between Cosmic Ray Particles with Energies Exceeding to 10^{11} eV and Beryllium Nuclei
(Ob obrazovanii elektronno-fotonnoy komponenty pri vzaimodeystvii chastits kosmicheskikh luchey s energiyey vyshe 10^{11} eV s yadrami berilliya. Russian)

PERIODICAL Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 33, Nr 7, pp 17 - 2o (U.S.S.R.)

ABSTRACT The present paper describes the results of experiments carried out with a WILSON chamber which was fitted in a magnetic field. This WILSON cloud chamber operated for 52 hours in a height of 9oo m. Above this cloud chamber a beryllium block was located, in the interior of which a lead plate was fitted. On the occasion of the production of electron-photon showers in the absorbers the cloud chamber was photographed. 149o photographs were obtained and on 86 of them electronic-nuclear showers from the beryllium block were found recorded. Among them 5 electronic--nuclear showers were found in which more than lo parts were observed. 4 photographs of interactions are attached. The most important data on the showers investigated here are shown in a table. This table imparts

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56-7-3/66

On the Formation of the Electron-Photon-Component in the Interaction between Cosmic Ray Particles with Energies Exceeding to 10^{11} eV and Beryllium Nuclei

various informations as e.g. on the number of particles observed above the lead plate, on the number of particles identified as electrons, on the number of particles which have passed through the lead plate without cascade multiplication, on the maximum number of penetrating particles, on the point where the showers were formed, on the angle $\Theta_{1/2}$ within which half of the particles is radiated, on the lower limit of the total energy of the penetrating particles, on the number of electrons below the lead plate with more than 6 and 3o eV, on the total energy of those electrons which were obtained by measuring the electron momenta below the plate, on the lower limit of the energy of the electron-photon components, on the energy of the electron-photon components produced on the occasion of the interaction, on the ratio between the energy of the electron-photon components and the energy of the impinging particle, and on the number of the secondary interactions observed in the lead plate. The data mentioned in this table show the following: On the occasion of the interaction of charged cosmic ray particles (10^{11} - 10^{12} eV) with light nuclei the energy transferred to the electron-photon component is subjected to important fluctuations and can drop down to some tenth of a percent.

Card 2/3 (With 4 illustrations and 1 table).

56-7-3/66

On the Formation of the Electron-Photon-Component in the Interaction between Cosmic Ray Particles with Energies Exceeding to 10^{11} eV and Beryllium Nuclei

ASSOCIATION Physical Institute "P.N.Lebedev" of the Academy of Sciences of the U.S.S.R.
(Fizicheskiy institut im. P.N. Lebedeva Akademii nauk SSSR)

PRESENTED BY
SUBMITTED 6.2.1957
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Card 3/3

BARADZEY, L.T.

AUTHORS: Baradzey, L. T., Rubtsov V.I., Smorodin Yu.A. 1, 20-4-14/60
Solov'yev M.V., Tolkachev B.V., Tulinova Z.I.,

TITLE: The Interaction of the Protons of Cosmic Rays With an Energy of About 10 BeV With Lead-Nuclei (Vzaimodeystviye protonov kosmicheskikh luchey s energiyey okolo 10^{10} eV s yadrami svintsa).

PERIODICAL: Doklady Akad.Nauk SSSR, 1957, Vol. 115, Nr 4, pp. 685-688 (USSR)

ABSTRACT: These investigations were performed in an altitude of 9000 m by means of a cloud chamber in a magnetic field with 9200 oersteds. The scheme for the control mechanism of the chamber is illustrated by a sketch. In order to exclude the interactions caused by pions, the nuclear showers caused in the lead-plate by one individual charged particle were investigated. Altogether 38 of those case were selected, the characteristic photographs of the showers are given. The maximum measured impulse of the charged particles was 3 BeV/c. A table illustrates the distribution of the showers on the number n of particles in the shower. The average number of the particles per interaction is $3,9 \pm 0,3$. The experimental data yield some indications concerning the chief components of the electron-nucleus showers. A diagram illustrates the data of the energy distribution of the electrons. When this spectrum is described by a law of the type $dN/dE \sim E^{-\gamma}$, the exponent γ is variable. $\gamma \sim 1$ in the case of small energies and $\gamma \sim 2,5$ in the case of energies of

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21(8) SOV/56-36-6-1/66

AUTHORS: Baradzey, L. T., Solov'yev, M. V., Tulinova, Z. I., Filatova, L. I.

TITLE: Momentum Spectrum of Particles of the Hard Component of Cosmic Rays at an Altitude of 9000 m (Spektr impul'sov chastits zhestkoy komponenty kosmicheskikh luchey na vysote 9000 m)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 6, pp 1617 - 1620 (USSR)

ABSTRACT: The authors report on the momentum spectra (for momenta between $0.3.10^9$ and 6.10^9 ev/c) recorded by them by means of a cloud chamber and a quintuple coincidence circuit obtained at an altitude of 9 km. In the introduction they describe the apparatus (Fig 1) and give a topographical description of the magnetic field (Fig 2) (average field strength 9090 Oe). Within 14 hours 700 photographs were taken, on which 445 curved traces having a length of 15-17 cm were measured by means of the optical compensator IG-22. For setting up the spectrum the traces were used which form an angle of $< 4^o$ with the chamber plane. Figure 3 shows a momentum spectrum obtained in this manner, composed from the data of two series of measurements. The absolute intensity of this spectrum corresponded to a total intensity of the hard

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component of 3.0 ± 0.15 particles $cm^{-2}min^{-1}steradian^{-1}$, which is in good agreement with the results obtained by Vernov et al (Ref 1). The spectral curve within the range of $(2-6).10^9$ ev/c can easily be represented by an exponential function with the exponent 2.8 ± 0.5. Figure 5 shows the measured (and also the calculated) spectral curves for negative particles, which were identified as muons, within a larger momentum range. A comparison with the results with μ^--spectra at sea level (Refs 5,6) leads to the conclusion that within the momentum interval of $5.10^8 - 3.10^9$ ev/c about 60% of all muons recorded at sea level are produced at altitudes of > 9 km. Figure 6 shows the spectrum of the positive particles; in the case of momenta $<7.8.10^8$ ev/c muons are concerned. The ratio between positive and negative muons within the range $(3-7)10^8$ ev/c is 1.7 ± 0.4. Within the momentum range $>7.8.10^8$ ev/c the positive particles may be both μ^+ mesons and protons. The ratio $k=\mu^+/\mu^-$ depends only slightly on momentum and altitude and is between 1.2 and 1.3. For momenta $>10^9$ ev/c, k= 1.25. Figure 6 shows the positive spectrum at an altitude of 9 km, viz. the muon- and the proton

curve on the basis of data obtained from two series. Within the range of $(1 \div 5).10^9$ ev/c it is found that the protons amount to $(50 \pm 10)\%$ of the total number of penetrating particles within this range. Also the spectral curves of the positive particles within the range of $(2 \div 5).10^9$ ev/c may be approximated by means of exponential curves, with an exponent which corresponds to the negative particle within the error limits. The authors thank Yu. A. Smorodin for supervising the work performed and for discussing the results obtained. There are 6 figures and 7 references, 1 of which is Soviet.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics of Moscow State University)

SUBMITTED: December 12, 1958

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S/627/60/002/000/013/027
D299/D304

AUTHORS: Baradzey, L. T., Rubtsov, V. I., Smorodin, Yu. A., Solov'yev, M. V. and Tolkachev, B. V.

TITLE: Absorption of high-energy nucleons in the atmosphere

SOURCE: International Conference on Cosmic Radiation. Moscow, 1959. Trudy. v. 2. Shirokiye atmosfernyye livni i kaskadnyye protsessy, 152-158

TEXT: The apparatus which was installed in an aircraft permitted studying large ionization bursts at various depths in the atmosphere: $p = 200$ gm/cm^2, $p = 310$ gm/cm^2, $p = 1020$ gm/cm^2. The apparatus incorporated ionization chambers and hodoscoped counters. The energy spectrum of the electron-photon component was obtained, for energies of $2 \cdot 10^{10}$ to $2 \cdot 10^{12}$ ev. It was found that in most cases the energy of the electron-photon component collimates well around the shower axis which lies in the area of the ionization chambers. A table shows the mean ionization-distribution in the chambers. The fast drop in energy density with distance from the shower axis

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shows that the recorded events are cascade showers of primary particles, namely gamma-quanta showers formed by the decay of π^0-mesons. The differential spectra of the electron-photon component show that for energies of $2 \cdot 10^{10}$ to $2 \cdot 10^{12}$ ev. the spectrum can be approximated by a power law with exponent $\tau = 2.75 \pm 0.07$ for all the altitudes under consideration. The electron energy spectrum for the one-dimensional problem was calculated in the approximation A which is sufficient for the small distances from the shower axis involved. The exponential change in atmospheric density was taken into account by means of Greisen's approximate method (Ref. 1: Fizika kosmicheskikh luchey (translation into Russian of "Progress in Cosmic Ray Physics", edited by J. G. Wilson), v. 3, chapt. 1, IL, 1958). The differential energy spectrum of the electron-photon component is

$$\frac{dN}{dE} = AE^{-\varepsilon} \int_0^\infty \alpha(t,E)\varepsilon^{-1}\left(1 - \frac{\partial \ln \alpha}{\partial \ln E}\right) e^{\frac{t}{\mu}}\, dt = AE^{-\varepsilon}C(E, P) \qquad (2)$$

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where C is the thickness of the effective layer for photon generation. Thereupon, the photon generation spectrum is obtained. The absorption length of the component which generates photons of energy 10^{11} to 10^{12} ev. is 120 gm/cm^2. Further, the energy of the nuclearactive particles is estimated which generate the photons. It was found that at pressures of 200 and 310 gm/cm^2, the electron density drops in accordance with the law $r^{-0.7 \pm 0.1}$, up to distances of 10 m from the ionization chambers. This table shows also the values of the energy of nuclearactive particles. It was established that the photons are generated by nuclearactive particles, whose energy is a hundredfold the enery of the photons. The study of electron-photon cascades at high altitudes, where the effective recording-layer is small, permits investigating the generation of the electron-photon component by the interaction of nuclearactive particles with energies of 10^{13} - 10^{14} ev., with light nuclei. The absolute intensity of the nuclearactive component was obtained on the assumption that on interacting with the carbon nucleus, the

Absorption of high-enery ...

high-energy nucleon transmits 10% of its energy to the π^0-mesons. The conclusion was reached that the absorption length of nuclearactive particles with energies of 10^{11} to 10^{13} ev. does not change, remaining close to 120 gm/cm^2. In this energy range, the spectrum of the primary cosmic particles is

$$N(>E) = 900\left(\frac{E}{10^{12}}\right)^{-1,5} \frac{\text{partiele}}{\text{m}^2 \text{ hour sterad}} \qquad (4)$$

4

The relation between the differential spectrum of the nuclearactive component (expressed by $E_0^{-\gamma}$), the differential spectrum of the generated π-mesons ($E^{-\varepsilon}$), and the energy of the π-mesons (following the law $E_\pi = \text{const} \cdot E_0^{\beta}$), yields the formula

$$\beta = \frac{\gamma - 2}{\varepsilon - 2} \qquad (5)$$

Card 4/5

From the experimental data it follows that $\beta \sim 0.5$; with a correction for the small number of high-energy particles, one obtains $\beta \sim 1$. There are 4 figures, 4 tables and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc (including 1 translation). The references to the English-language publications read as follows: M. F. Kaplon, J. Z. Klose, D. M. Ritson, W. O. Walker, Phys. Rev., 91, 1573, 1953; K. Kamata, J. Nishimura, Suppl. of Progr. Theor. Phys., no. 6, 93, 1958.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR(Physics Institute im. P. N. Lebedev AS USSR); Nauchno-issledovatel'skiy institut yadernoy fiziki MGU (Scientific Research Institute of Nuclear Physics Moscow State University)

BARADZEY, L. T., RUBTSOV, V. I., SOLOVYEV, M. V. and TOLKACHEV, B. V.

"Production of the Electron-Photon Component in the Interaction of Particles of Energies 10^{12} to 10^{14} ev with Light Nuclei in Atmosphere"

Report presented at the International Conference on Cosmic Rays and Earth Storm, 4-15 Sep 61, K yoto, Japan.

P. N. Lebedev Physical Institute of the Academy of Science of the USSR and Nuclear Physics Research Institute of the Moscow University, USSR

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000103420015-5"

37282

S/169/62/000/004/067/103
D218/D302

3,2410 (2205, 2705, 2805)

AUTHORS: Baradzey, L.T., Logachev, Yu.I., and Shishkov, P.P.

TITLE: A study of cosmic-ray variations at altitudes of 9 - 12 km

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1962, 13, abstract 4G66 (V sb. Kosmicheskiye luchi, no. 3, M., AN SSSR, 1961, 137-142)

TEXT: A report is given of the results of measurements of the general, hard, and neutron cosmic-ray components at altitudes of 9 - 12 km, which were carried out from an airplane in 1959 and covered the geomagnetic latitude range between 43° and 59°N. The readings of the instruments were recorded at intervals of five minutes. The following values of the barometric coefficients were determined from the altitude variation of the intensity in the pressure range 750 - 220 g/cm^2 : (0.495 ± 0.009)% g^{-1}cm^2 for the general component (0.405 ± 0.014)% g^{-1}cm^2 for the penetrating component and (0.654 ± 0.27)% g^{-1}cm^2 for the neutron component. At the altitude of 9 km in the latitude range 52° - 60°N, the latitude effect in the neutron

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A study of cosmic-ray variations ...

component was (-2.4 ± 1.1)%; the latitude effect was absent in the general and hard components. At the altitude of 12 km and latitude of 44° - 52°N, the latitude effect in the neutron component reached (-14.7 ± 1.6)%, while the result for the hard and general components was (-9.0 ± 1.3)% and (-6.3 ± 0.8)% respectively. A reduction in the intensity of all the components was found during geomagnetic storms. In a number of cases the recovery in the intensity of the neutron component after the Forbush effect was incomplete. Moreover, it was found that after the Forbush effect, the recovery of the intensity of all the components to the normal level is faster at higher altitudes. [Abstractor's note: Complete translation].

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3, 2410 (2205, 2705, 2805)

S/048/62/026/005/004/022
B108/B104

AUTHORS: Baradzey, L. T., Rubtsov, V. I., Smorodin, Yu. A., Solov'yev, M. V., and Tolkachev, B. V.

TITLE: Formation of an electron-photon component in the interaction of particles of 10^{12}-10^{14} ev with light nuclei in the atmosphere

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 5, 1962, 575-584

TEXT: With the aid of ionization chambers with an area of 0.2 m^2, the authors obtained data on: (1) the energy spectra of electron-photon avalanches falling upon the apparatus from the air at pressures of 200, 300, and 1030 g/cm^2; (2) the energy spectra of cascades induced by nuclear-active particles in the graphite block above the apparatus at pressures of 200 and 300 g/cm^2; (3) the air showers accompanying the particles. The particle densities in the showers were determined immediately at the

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apparatus and 10 m away from it. The major part of photons is produced by particles of an energy exceeding the photon energy by one order of magnitude. The photon spectra at high energies (above $2\text{-}4\cdot10^{12}$ ev) differ considerably from those obtained at low energies. This is probably due to increased energy dissipation by new secondary radiation processes. The absorption path of nuclear-active particles in the atmosphere can be determined from the absorption path of the component producing the electromagnetic cascade in the light substance, or from the absorption path of the component producing high-energy photons in the atmosphere. The coefficient of inelasticity of nucleon interaction remains unchanged over a wide range of energies. The intensity of primary cosmic radiation in the energy range $2\cdot10^{11}\text{-}2\cdot10^{13}$ ev is

$$N(>E) = (600 \pm 150)(E/10^{12})^{-1.7 \pm 0.15}\ \text{hr}^{-1}\text{m}^{-2}\text{sterad}^{-1}.$$

This spectrum is consistent with results of more accurate calculations. There are 9 figures and 3 tables.

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Formation of an electron-photon...

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR); Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gos. universiteta im. M. V. Lomonosova (Scientific Research Institute of Nuclear Physics of the Moscow State University imeni M. V. Lomonosov)

IX

Card 3/3

L 4662-65 EWT(m)/ DIAAP

ACCESSION NR. AT4049957 S/2504/64/026/000/0224/0248

AUTHOR: Baradzey, L. T.; Rubtsov, V. I.; Smorodin, Yu. A.; Solov'yeva, [illegible]; Tolkachev, R. V.

TITLE: Passage of high-energy nucleons through the atmosphere and the formation of mesons

SOURCE: AN SSSR. Fizicheskiy institut. Trudy*, v. 26, 1964. Kosmicheskiye luchi (Cosmic rays), 224-248

TOPIC TAGS: cascade multiplication, pion, nucleon, meson, avalanche, muon, gamma quantum, high energy particle

ABSTRACT: An analysis is made of recently collected data on the passage of [illegible] through the atmosphere. Energies of [illegible] with instruments which recorded ionization bursts resulting from [illegible]

[illegible]

where the effective fraction of energy conversion is close to 0.5 and the fraction of energy

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transferred to the electronphoton component during interation with nuclei of the air Δ_{e-p} is such that

$$\int_0^1 \Delta_{\gamma\text{-}\Phi}^{1,7} / (\Delta_{\gamma\text{-}\Phi})\, d\Delta_{\gamma\text{-}\Phi} = 0{,}08 \pm 0{,}02 = 0{,}22^{1,7}. \quad (2)$$

Data on the flux of nuclear-active cosmic-ray components at various atmosphere depths is summarized. Energy spectra of electron-photon avalanches incipient in the atmosphere and generation of γ-quanta are discussed. The formation of pions and pion fluxes in the atmosphere is treated. The fraction of energy carried by π^0-mesons generated in the energy range below 10^{14} ev is expressed as

$$\int_0^1 \Delta_{\pi^0}^{1,7} / (\Delta_{\pi^0})\, d\Delta_{\pi^0} = 0{,}033 \pm 0{,}007 = 0{,}14^{1,7}. \quad (3)$$

Calculation of charged pion flux indicates that the generation of mesons of different sign may be expected at energies of about 10^{11} ev. It also indicates that in the 10^{11} - 2.10^{12} ev range pions make a significant contribution to nuclear-active components of the flux. About half of the nuclear cascades of a given energy and generated [illegible] filters are formed in the lower third of the atmosphere by π^0-mesons. [illegible]

L 24662-65

ACCESSION NR: AT4049957

thank S.N. Vernov for his constant help, as well as R.A. Antonov for carrying out the godoscopic studies. Orig. art. has: 12 figures, 9 tables and 29 formulas

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 025 OTHER: 015

Card 3/3

L 16016-65 EWT(m) DIAAP/AFWL/SSD
ACCESSION NR: AP4049588 S/0048/64/028/011/1807/1811

AUTHOR: Baradzey, L. T.; Rubtsov, V. I.; Smorodin, Yu. A.; Solov'yev, M. V.

TITLE: Passage of high-energy nucleons through the atmosphere and the formation of mesons. [Report presented at the Seventeenth [illegible] Conference on Cosmic Rays held in Moscow from [illegible]]

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v. 28, 1807-1811

TOPIC TAGS: primary nucleon, cascade spectrum, nuclear component, terrestrial atmosphere, energy nuclear cascade, electron photon component, meson, pion

ABSTRACT: The spectrum of the primary nucleons in meson generation [illegible] differs [illegible] from the cascade spectra. The absorption [illegible] in the terrestrial atmosphere [illegible] by the [illegible] of the energy of secondary particles of the primary component, neglecting the magnitudes of these energies. The

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flux of the active nuclear component in the atmosphere at a depth t may be computed by using formulas for high energies and comparing the results with spectra of the nuclear cascades. The part of the energy transfered to the electron-photon component during the nuclear interaction is ... . This result makes it possible ... the generation of π^0-mesons with energies of 10^{11}— ... portional to the energy of active nuclear particles. The formation of π^0 and ... may resemble the formation of π^0 mesons ... generated pions is 0.26 ... An ... mesons are ... of the π meson energy. ... figures, 5 formulas, and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gos. ... universiteta im. M. V. Lomonosova (Scientific Research Institute of Nuclear Physics ... Moskovskiy institut im. P. N. ... SSSR (Institute of Physics, Academy of Sciences, SSSR)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000103420015-5"

L 16016-65

ACCESSION NR: AP4049588

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 012 OTHER: 012 ATD PRESS: 3142

Card 3/3

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A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 7, p. 83, # 6499

AUTHOR: Baradzhanov, P.B.

TITLE: Photographic Observations of Perseids IV

PERIODICAL: Byul. In-ta Astrofiz. AN TadzhSSR, 1958, No. 26, pp. 13-20

TEXT: The author analyzes the results of determining the radiants and orbits of 25 meteors from the Perseid stream photographed from two stations at Ashkhabad prior to 1955 by means of "Industar 7" cameras (D=3 cm, F=10.5 cm). The observations were performed during the season range from 6 to 19 August. The diurnal shift of the radiant amounted to $1^{\circ}.45$ in α and $0^{\circ}.09$ in δ. The values of coordinates of radiants, altitudes, velocities and orbital elements are cited in a table. Orbital elements are strongly scattered. The conclusion is drawn that the effect of secular perturbations by the major planets and observational errors can not fully account for the observed scatter in the great semi-axes and eccentricities of the orbits; therefore, a considerable

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Photographic Observations of Perseids

part in this scatter should have played by high initial velocities of meteoric bodies ejection from the comet nuclei, as well as by the local perturbations by the major planets. There are 13 references.

P.B. Babadzhanov

Translator's note: This is the full translation of the original Russian abstract.

BARADZIEJ, Laszlone

Work of the factory committee of the Kispest Textile Factory. Munka 11 no.4:11 Ap '61.

1. Kispesti Textilgyar szb-titkara.

(Hungary—Textile factories)
(Hungary—Trade unions)

VARGA, Gyorgy; TOROK, Istvan; ZABRACZKY, Geza; TRAUTMAN, Rezso; KOVACS, Istvan; BARADZIEJ, Laszlone; PALFALVI, Andras; GROF, Jozsef

The 1961 national economic plan and the tasks of trade unions; the 9th plenary session of the National Council of Trade unions. Munka 11 no.2:1-6 F '61.

1. Szakszervezetek Orszagos Tanacsa titkara, es Szerkeszto bizottsagi tag, "Munka". (for Varga) 2. Vasas Szakszervezet fotitkara (for Torok) 3. Tatabanyai Trosztbizottsag titkara (for Zabraczky) 4. Epitesugyi miniszter, Budapest (for Trautman) 5. MEDOSZ fotitkara (for Kovacs) 6. Kistex szb titkara (for Baradziej) 7. Fejermegyei Szakszervezeti Megyei Tanacs vezeto titkara (for Palfalvi) '. Vasutas Szakszervezet titkara (for Grof).

(Hungary--Economic policy)
(Hungary--Trade unions)

KURDYAYEV, Boris Sergeyevich; SHILOV, F.G, redaktor; BARAG, T.Ya, redaktor; KOZLOV, S.V., tekhnicheskiy redaktor

[Engineer G.A.Maniukov's system of bricklaying] Kirpichnaia kladka sistemy inzhenera G.A.Maniukova. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 26 p. (MLRA 9:10)
(Building blocks) (Bricklaying)

NUDEL'MAN, Sergey Borisovich; SHILOV, F.G., redaktor; BARAG, T.Ya., redaktor; CHEZHIK, F., tekhnicheskiy redaktor

[Large brick block apartment houses] Zhilye doma iz krupnykh kirpichnykh blokov. Alma-Ata, Kazakhskoe gos.izd-vo, 1956. 20 p. (Apartment houses) (Building blocks) (MLRA 10:7)

BARAGIN, D

Kalinin. Moskva, Gosudarstvennoe
Izdatel'stvo Literatury Po Strontea' ctvu I arkhitekture, 1952.
74 p. Illus (Architektura Gorodov SSSR)

SO: 227W/5
884
.B2

BARAK, JAN [Barak, Jan]

Dyeing of polyester fibers at high temperatures. Tekst. prom. 18 no.6:61-63 Je '58. (MIRA 11:7)
(Dyes and dyeing--Rayon)

; CZECHOSLOVAKIA/Soil Science - Mineral Fertilizers. J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67945

Author : Barak, K.

Inst : Brno Agricultural Higher School and Forestry Faculty.

Title : Pot Experiments with Fertilization of Agricultural Crops Using Ammonia Water.

Orig Pub : Sbor. Vysoke skoly zemed. a Lesn. fak. Brne, 1956, A, No 4, 265-271.

Abstract : Between 5 and 100 ml. of ammonia water containing 0.56% N, were added to a pot. When the ammonia water was added 10 days before transplanting turnip seedlings to the pot, the highest tuber yield was 145 grams per pot, while in the control pot the yield was only 32 grams. When the ammonia water was added 10 days after transplanting the seedlings, the turnip weight was 434 grams (with an optimal dose of

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CZECHOSLOVAKIA/Soil Science - Mineral Fertilizers. J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67945

40 ml.); with a dose of 100 ml. the yield dropped to 384 grams. -- Z.I. Zhurbitskiy

Card 2/2

BARAK, R.

Fast but with safety.

p. 609 (Svet Motoru) Vol. 11, no. 20, Sept. 1957, Praha, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

BARAK, TS. M., SHEVTE[illegible], N. F., AKHMETAYEV, M. A.

"Types of tularemia foci in Kazakhstan, the conditions of their existence and the factors contributing to the incidence of tularemia in these foci." p. 206.

Desyatoye soveshchaniye po parasitologicheskim problemam i prirodnochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 259pp.

Central Asiatic Anti-plague Institutes/Alma Ata

SEMIOTROCHEV, V.L.; BARAK, TS.M.; SPITSIN, M.P.; POPINYAN, I.O.; YERUSHEVA, L.F.; MISALEVA, O.S.

Pasteurellosis in man in Kazalinskiy District of Kzyl-Orda Province. Zhur. mikrobiol., epid. i immun. 42 no.8:143-144 Ag '65. (MIRA 18:9)

1. Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy institut, Alma-Ata.

UZBEKOVA, B.R.; SHMUTER, M.F.; BARAK, TS.M.; BOLTUNOV, P.I.

Influence of preventive inoculations on the incidence of brucellosis in the Kazakh S.S.R. Zdrav. Kazakh. 21 no. 3:66-70 '61.
(MIRA 14:4)

1. Iz Sredne-Asiatskogo protivochumnogo instituta (direktor - kandidat meditsinskikh nauk M.K. Tleugabylov) i Kazakhskoy respublikanskoy sanitarno-epidemiologicheskoy stantsii.
(KAZAKHSTAN--BRUCELLOSIS)

BARAKAN, Kh. B.

"One of the Possible Causes of Airplane Icing," Met. i Gidrol., No.10/11, pp 188-192, 1939

Leningrad Inst. of Meteorology

Translation- Air Service Command, No.3, June 1943

BARAKAN, N.A.

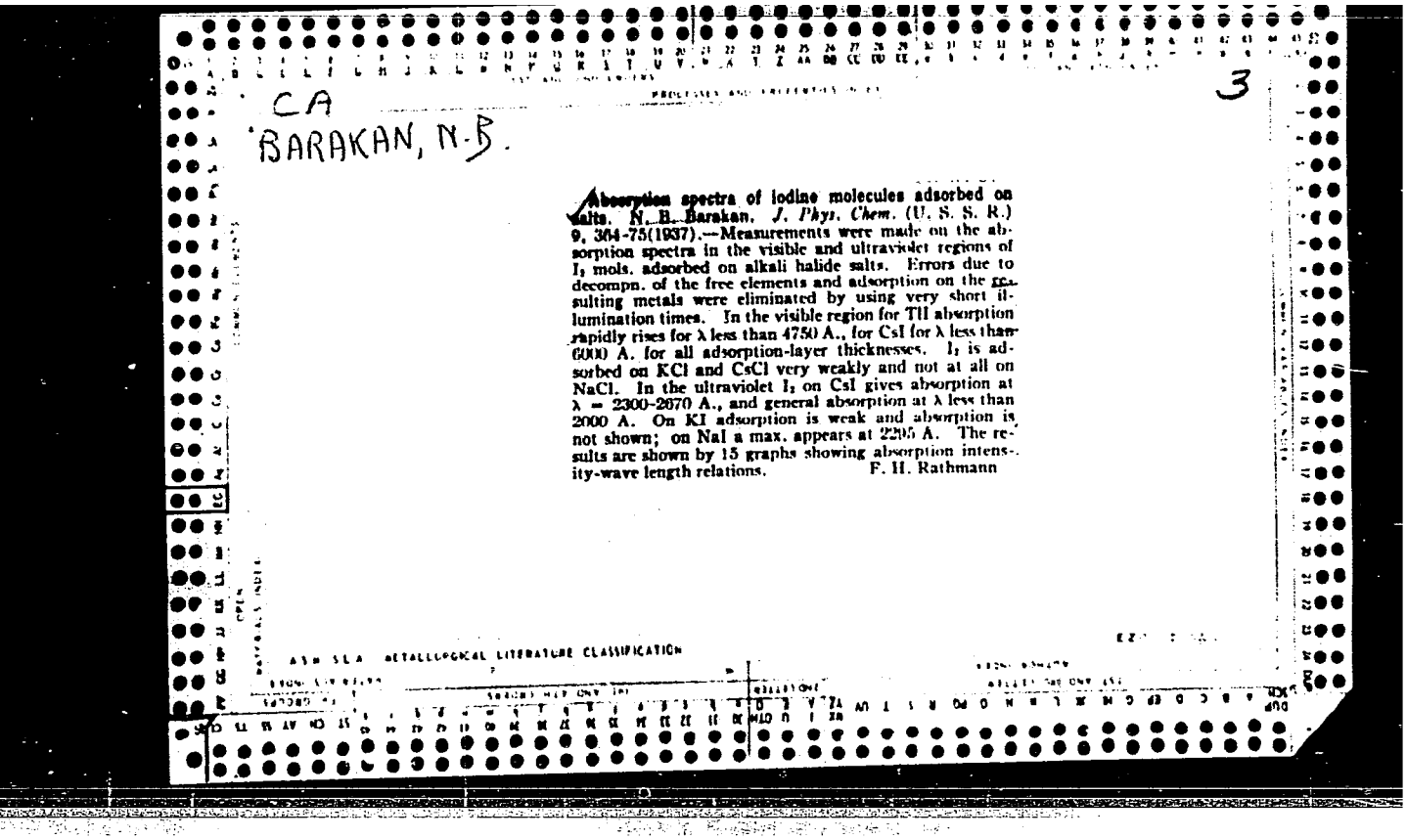
BARAKAN, N.A.

Semiconductor photoresistor transducers used in automatic control and sorting units. Stan. i instr. 28 no.10:33-34 O '57. (MIRA 10:11)
(Photoelectric measurements) (Transducers)

Баракан Н.А.

BARAKAN, N.A.

The PCh-2 profilometer. Stan. i instr. 28 no.12:37-38 D '57.
(MIRA 10:12)
(Surfaces (Technology)--Measurement)



CA

BARAKAN, N.B.

3

Absorption spectra of iodine molecules adsorbed on salts. N. B. Barakan. *J. Phys. Chem.* (U. S. S. R.) 9, 364-75(1937).—Measurements were made on the absorption spectra in the visible and ultraviolet regions of I_2 mols. adsorbed on alkali halide salts. Errors due to decompn. of the free elements and adsorption on the resulting metals were eliminated by using very short illumination times. In the visible region for TlI absorption rapidly rises for λ less than 4750 A., for CsI for λ less than 6000 A. for all adsorption-layer thicknesses. I_2 is adsorbed on KCl and CsCl very weakly and not at all on NaCl. In the ultraviolet I_2 on CsI gives absorption at λ = 2300-2670 A., and general absorption at λ less than 2000 A. On KI adsorption is weak and absorption is not shown; on NaI a max. appears at 2295 A. The results are shown by 15 graphs showing absorption intensity-wave length relations. F. H. Rathmann

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

BARAKAN, N. B.

BARAKAN, N. B.

Ob odnoi vozmozhnoi prichine obledeneniia vozdushnykh sudov. (Meterologiia i gidrologiia, 1939, no.10/11, p.188-192, diagrs.)
Title tr.: One of the possible causes of airplane icing.

QC851.M27 1939

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

BARAKAT, M.F.; FIRSOVA, L.P.; NESMEYANOV, An.N.

Reaction of C^{14} recoil atoms in mixtures containing α-picoline. Radiokhimiia 7 no.3:361-363 '65. (MIRA 18:7)

FIRSOVA, L.P.; BARAKAT, M.F.

Measurement of the activity of the components of complex mixtures of organic substances containing carbon-14. Radiokhimiia 4 no.6:740-742 '62. (MIRA 16:1)
(Chromatographic analysis) (Carbon--Isotopes)
(Organic compounds)

FIRSOVA, L. P.; NESMEYANOV, A. N.; BARAKAT, M. F.; FORYS, M.

"The interaction of C^{14} recoil atoms in binary mixtures."

report presented at IAEA Symp on Chemical Effects Associated with Nuclear Reactions and Radioactive Transofmrations, Vienna, 7-11 Dec 64.

BARAKAT, M.F.; FIRSOVA, L.P.; NESMEYANOV, An.N.

Reaction of carbon-14 recoil atoms with pyridine and its homologs. Radiokhimiia 6 no.5:605-610 '64. (MIRA 18:1)

Reaction of carbon-14 recoil atoms with pyrrole, 2-methylpyrrole, and piperidine. Ibid.:626-630

YAZYKOV, P.P., kand.sel'skokhozyaystvennykh nauk; BARAKAYEV, M.

Changes in the growth of stems and weight of corn ears as related to the density and size of squares. Agrobiologiia no.6:931-932 N-D '62. (MIRA 16:1)

1. Vsesoyuznyy ordena Lenina nauchno-issledovatel'skiy institut khlopkovodstva.
(Uzbekistan--Corn (Maize))
(Plants, Space arrangement of)

BARAKAYEV, KH.F.

110-9-2/23

AUTHOR: Sakovich, A.A., Candidate of Technical Sciences, Khudyakov, V.V., Candidate of Technical Sciences, Lazarev, N.S. and Barakayev, Kh.F., Engineers.

TITLE: An Investigation into the Possibility of Autonomous Supply of the Auxiliary Power Requirements of High-voltage Mercury Valves. (Issledovaniye vozmozhnostey avtonomnogo pitaniya sobstvennykh nuzhd vysokovol'tnykh rtutnykh ventiley)

PERIODICAL: Vestnik Elektropromyshlennosti, 1957, Vol.28, No.9, pp. 3 - 8 (USSR).

ABSTRACT: The rectifier/inverter sub-stations of high-voltage d.c. transmission systems use bridge-connected rectifiers whose cathodes may be at very high voltages to ground. The mercury valves require some 1 - 3 kW of auxiliary power, at cathode potential, for ignition excitation, anode heating, and electrode control. It is very difficult to supply the power at the necessary voltage, and special isolating transformers are used which often require to be connected in cascade. It has recently been proposed to tap the power from the damping circuit between the valve anode and cathode. This circuit comprises a series capacitance and resistance used as a potential divider and is usually an essential part of the converter. Control signals are

An Investigation into the Possibility of Autonomous Supply of the Auxiliary Power Requirements of High-voltage Mercury Valves.

transmitted by a modulated light ray which acts on a photo-cell operating at valve potential. The method obviates an isolating transformer and is simpler and cheaper. The principles of tapping power from the damping circuit are then explained. Fig.1 shows the valve bridge of a rectifier/inverter sub-station for the d.c. Stalingrad-Donbas system. The rated voltage of the bridge is 100 kV and the transmitted current 900 A. The three-phase output of the transformer is at 83 kV. The principal operating conditions of a sub-station are considered and an expression is written for the voltage in each case. It is shown that the inverse-voltage contains only the fundamental frequency and multiples of three. The relationship between the harmonic content of the voltage and the fixing angle is shown in Fig.2 and it is concluded that a filter must be provided in order that power may be tapped from the damping circuit. The corresponding circuit is shown in Fig.3a. The only additional equipment required is a transformer with an insulation level of 10 kV. The procedure for calculating the maximum power from a tapping is described and the simplifying assumptions underlying the calculation are stated. A vector diagram for the equivalent

 circuit (Fig.3b) is used to construct graphs of the active

(Fig.4) and reactive (Fig.5) power as functions of the circuit parameters. Fig.6 gives the reactive power and the loss in the choke coil as functions of the capacitance for various values of the capacitance in the damping circuit. Hence, the useful power from the tapping is determined and it is shown that some increase in the capacitance of the damping circuit extends the useful range of power tapped. The power calculations were verified experimentally on a model of the circuit. The damping and tapping circuits were connected in parallel with a thyratron model of a power system sub-station. Voltage oscillograms were taken with firing angle values and transmitted current corresponding to the main operating conditions. The results were worked out on a scale corresponding to the Stalingrad-Donbas scheme and showed that for firing angles close to 0 or 150 (which correspond to normal transmission conditions) the voltage waveform was satisfactory. For angles near 90° the voltage waveform was very distorted. This was because of insufficiently-close tuning of the tapping circuit and non-linearity of the inductance of the choke. If the choke is linear the voltage distortion is much less. For firing angles close to 0 and 150° the tapped voltages and power are in good agreement with the

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calculated values. The proposed circuit has a number of advantages compared with supplies from isolating transformers. It requires only a capacitor, a transformer and a choke, with an insulation level of 10 kV, which are much cheaper than an isolating transformer with an insulation level of 400 kV. A disadvantage of the system is the need to raise the capacitance of the damping circuit. The circuit can be used for all transmission system valves except shunting valves. It can also be used successfully for low-voltage mercury-arc rectifiers in industry and traction to deliver power at voltages of 0.8 - 15 kV. It is best suited to sealed-off valves and has limitations when applied to pumped valves.
There are 6 figures and 2 Slavic references.

ASSOCIATION: All-Union Electrotechnical Institute (VEI)

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VOSKRESENSKIY, V.V., kand.tekhn.nauk; BARAKAYEV, Kh.F., inzh.; TRAVIN, L.V., inzh.

Physical model for the d.c. transmission system from the Stalingrad Hydroelectric Power Station to the Donets Basin. Elektrichestvo no.2:28-35 F '60. (MIRA 13:5)

1. Vsesoyuznyy elektrotekhnicheskiy institut imeni Lenina.
(Electric power distribution--Direct current)

VOSKRESENSKIY, V.V.; SAKOVICH, A.A.; BARAKAYEV, Kh.F.; TRAVIN, L.V.

Improvements of the operating conditions of rectifiers in three-phase bridge circuits. Izv. vys. ucheb. zav.; elektromekh. 5 no.2:229-232 '62. (MIRA 15:3)
(Electric current rectifiers) (Bridge circuits)

BARAKAYEV, Yu.

On the front line in the campaign for meat. Svinovodstvo 13 no.11:15-20 N '59. (MIRA 13:2)

1. Glavnyy zootekhnik Dnepropetrovskogo oblastnogo upravleniya sovkhozov.
(Swine)

KRIVITSKIY, Ya.Ye. dotsent; BARAKH, T.F.

Clinical aspects and treatment of collapse in late toxemias of pregnancy. Sov. med. 24 no. 7:43-45 Jl '60. (MIRA 13:8)

1. Iz kafedry akusherstva i ginekologii (ispoln. obyazan. zav. - dotsent Ya.Ye. Krivitskiy) Orenburgskogo meditsinskogo instituta (dir. - dotsent S.S. Mikhaylov).
(PREGNANCY, COMPLICATIONS OF) (SHOCK)

FIGEL', T., master; BARAKHMAN, M.A., slesar'-instrumental'shchik

Polishing organic glass. Prom. koop. 12 no.9:6 S '58.
(MIRA 11:10)

1.Artel' "Promgalkombinat", Kiyev.
(Plastics) (Grinding and polishing)

BARAKHOVSKIY, S. A.

"Patriotic Efforts of Laborers of Machine Construction Plants in the city of Kuybyshev during the years of the Great W. W. II (1941-1942)."

report presented at the 13th Scientific Technical Conference of the Kuybyshev Aviation Institute, March 1959.

LYAKHOV, Konstantin Stepanovich, inzh.; CHENTSOV, Konstantin Petrovich, inzh.; SVIRIDOV, A.A., retsenzent; POGODIN, S.M., retsenzent; BARAKIN, A.P., red.; MAKRUSHINA, A.N., red.izd-va; RIDNAYA, I.V., tekhn. red.

[Practical manual for a dispatcher in the river fleet] Prakticheskoe posobie dispetcheru rechnogo flota. Moskva, Izd-vo "Rechnoi transport," 1963. 197 p. (MIRA 16:12)
(Inland water transportation—Handbooks, manuals, etc.)

YERMAKOV, V.V., dotsent; BARAKOVSKIY, V.V.

Immediate tasks in the advanced training of subprofessional medical personnel. Med. sestra 20 no. 2:10-14 F '61. (MIRA 14:4)
(MEDICINE--STUDY AND TEACHING)

BARAKHTIN, A.I. (Vladivostok)

Providing conveniences for passengers. Zhel. dor. transp. 47 no.7:38-40 JI '65. (MIRA 18:7)

1. Revizor finansovogo otdela Vladivostokskogo otdeleniya dorogi.